



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,467	10/15/2003	Steven E. Sund	H0005436	8860

7590 10/07/2004

Honeywell International, Inc.  
Law Dept. AB2  
P.O. Box 2245  
Morristown, NJ 07962-9806

EXAMINER
----------

PEAVEY, ENOCH E

ART UNIT	PAPER NUMBER
----------	--------------

3676

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/687,467	SUND ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Enoch E Peavey	3676	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>15 October 2003</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3676

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

I. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 1-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al., US No. 5,897,118 in view of Gasdaska et al., US No. 6,131,797. Ito discloses a face seal assembly (FIG. 2) comprising an annular seal rotor having a metal base portion (12) with a radially extending flange and first and second axially facing surfaces (forming the cross sectional shape of 12). There is a first ceramic ring (13) mounted to the first axially facing surface of the flange. There is a second ceramic ring (also 13) mounted to the second axial facing surface of the flange (FIG. 2). There is an annular stator (14) having an axially facing surface that sealingly engages an axially facing surface of the first ring (13). Ito does not disclose the first and second rings mounted by a brazed joint formed from molybdenum bar stock, silver, or copper foil. Gasdaska discloses such a joint (Col. 4, lines 60-65) in order to prevent stress that occurs when joining the two materials having different expansion rates (Col. 1, lines 12-16). It would have been obvious to one of ordinary skill in the art at the time of applicants

Art Unit: 3676

invention to modify Ito as taught by Gasdaska in order to eliminate the stress that occurs when joining the two materials having different expansion rates.

B. Claims 1-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al., US No. 5,897,118 in view of Munshiet al., US No. 6, 450,762. Ito discloses a face seal assembly (FIG. 2) comprising an annular seal rotor having a metal base portion (12) with a radially extending flange and first and second axially facing surfaces (forming the cross sectional shape of 12). There is a first ceramic ring (13) mounted to the first axially facing surface of the flange. There is a second ceramic ring (also 13) mounted to the second axial facing surface of the flange (FIG. 2). There is an annular stator (14) having an axially facing surface that sealing engages an axially facing surface of the first ring (13). Ito does not disclose the first and second rings mounted by a brazed joint. Ito does not disclose the first and second rings mounted by a braze joint formed between the first and second rings and the flanges. Munshi discloses brazing a ring to a flange of a face seal in order to securely fasten the ring to the flange (Col. 4, lines 56-59). It would have been obvious to one of ordinary skill in the art at the time of applicants invention to braze the first and second rings of Ito to the flange as taught by Munshi in order to securely fasten the ring to the shaft.

II. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enoch E Peavey whose telephone number is

Art Unit: 3676

305 1977. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on (703) 306-4115. The fax phone numbers for the organization where this application or proceeding is assigned are 305 3597 for regular communications and 305 3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 1113.

Enoch Peavey

Art Unit 3676

  
September 30, 2004